REMARKS

This invention provides for herbicidal compositions that are useful against unwanted plants that are associated with tolerant maize crops. Applicants discovered that particular combinations of herbicides interact synergistically when they are employed to combat unwanted plant growth in tolerant maize crops. This invention further provides for the use of the inventive herbicidal combinations in combatting unwanted plant growth in fields planted with maize.

This Amendment adds two claims, and a check for $36.00 is enclosed to cover the cost of these new claims. It is believed that no further fee is due. If, however, an additional fee is required, the Assistant Commissioner is authorized to charge said fee, or refund any overpayments, to Deposit Account No. 50-0320.

This amendment amends claims 17, 22, and 37, and adds claims 39 and 40 without prejudice or the intention of creating estoppel. Amendments to claim 17, 22, and 37 were made to correct miswriting of "glufosinate" as "glyphosinate," and "clefoxidim" as "aclefoxidim." Applicants thank the Examiner for identifying these typographical errors. Support for new claims 39 and 40 is found throughout the specification, particularly on page 2, line 21 to page 4, line 2 and page 12, line 10 to page 16, line 9. New claims 39 and 40 read on the combination of glufosinate-ammonium with mesotrione, the species previously elected with traverse.

Claims 16 and 24, and claims dependent thereon, were rejected under 35 USC 112, first paragraph. Applicants respectfully note that the provisos introduced into claims 16 and 24 merely exclude a subset of combinations. Support for the provisos can be found in *In re Johnson*, 194 USPQ 187 (CCPA 1977): "...it is for the inventor to decide what bounds of protection he will seek," and referring to *In re Saunders*, 170 USPQ 213 (CCPA 1971), which stated that an applicant cannot be denied "the right...to retreat to an otherwise patentable species merely be-

cause he erroneously thought he was first with the genus when he filed." The proviso clause recited in the independent claims was added in order to exclude the specific combinations described in the proviso that were provided for in EP 569 944 (U.S. equivalents: U.S. Patent Nos. 5,461,019 and 5,696,031), WO 96/41547 (U.S. Patent No. 5,990,047) and WO 96/32012 (U.S. Patent No. 95,987,432). These prior publications were mentioned in the European Search Report that formed the basis of the IDS filed May 4, 2000.

Claims 16-18, 20, 21, 23-26, 28-32, 35, and 36 were rejected under 35 USC 103(a) as allegedly being unpatentable over the combined teachings of Takematsu et al., U.S. 4,265,654 ("Takematsu") and Carter et al., U.S. 5,006,158 ("Carter"). Applicants respectfully disagree since neither patent taken alone or in any fair combination suggests to one or ordinary skill in the art that one could combine particular herbicides and arrive at a particular combination that exhibits synergistic herbicidal activity against unwanted plants in tolerant crops of maize. Accordingly, withdrawal of this rejection is requested.

The rejection concludes that "it would have been *prima facie* obvious to one of ordinary skill in the art at the time the invention was made to have used Applicants' elected glufosinate and mesotrione together or in sequence for the control of weeds because the prior art teaches that it was well known to use glufosinate in combination with additional secondary herbicides." Office Action at 6. Applicants respectfully disagree because neither patent suggests that the inventive combinations would be useful against unwanted plant growth in tolerant maize, let alone the fact that the herbicidal activity would be synergistic. In fact, it should be noted that Takematsu and Carter are silent with respect to tolerant maize crops. Hence, these prior patents cannot provide any motivation to prepare herbicidal combinations comprising specific herbicides.

Moreover, for the reasons that follow, it is respectfully urged that Takematsu taken with Carter does not suggest to one skilled in the art the inventive combinations. Hence, the rejection is based upon impermissible hindsight and should be withdrawn.

Takematsu describes herbicidal combinations which are used non-selectively against the undesired plants (i.e., they are total herbicides). Alloxydim, a herbicide not presently claimed, is not a herbicide one in the art would expect to be useful again maize crops since the herbicide is not selective and cannot be used in monocotyledonous crops such as maize. In support of their position, Applicants point to the description of alloxydim found in the "The Pesticide Manual", 12th edition 2000 which states:

> USES: It is used post-emergence against grass weeks and volunteer cereals in sugar beet, vegetables and broad-leaved crops at 0.5-1.0 kg a.i./ha. Split applications with herbicides effective against broad-leaved weeds are recommended to increase the range of herbicidal activity. Phytotoxicity Non-phytotoxic to broad-leaved crops.

Hence, a practitioner would not look to the teaching of Takematsu if he were interested in preparing herbicidal combinations against maize since alloxydim is a non-selective herbicide.

Carter relates to novel benzoylcyclohexane diones. Benzoylcyclohexane diones achieve their herbicidal activity by a mechanism of action which is different from cyclohexanedione oximes, such as alloxydim. Alloxydim is a herbicide having a mode of action as inhibitors of fatty acid biosynthesis in plants; see e.g., "The Pesticide Manual", 12th edition 2000, under section "Alloxydim", subsection "Biochemistry":

> Alloxydim/Biochemistry
> Fatty acid synthesis inhibitor, by inhibition of acetyl CoA carboxylase (ACCase). Mitosis inhibitor. Mode of action, Selective systemic herbicide, absorbed predominantly by the leaves, and, to a lesser extent, by the roots.

Mesotrione is not a fatty-acid synthesis inhibitor. Mesotrione is a HPPDO-inhibitor in plants; see e.g. "The Pesticide Manual", 12th edition 2000, section "Mesotrione", subsection "Biochemistry":

> Mesotrione/Biochemistry
> p-Hydroxyphenyl pyruvate dioxygenase inhibitor, which ultimately affects carotenoid biosynthesis. Selectivity in maize derives from differential metabolism. Mode of action Uptake is foliar and via the root, with both acropetal and basipetal translocation. Symptoms are whitening of leaves, followed by necrosis of the meristematic tissue.

Hence, mesotrione is completely different from alloxydim in terms of its mode of action. Thus, two herbicides care not recognized in the art as equivalent. Hence, the practitioner would not be motivated to substitute mesotrione for alloxydim in the herbicidal compositions taught in Takematsu and the rejection does not establish a *prima facie* case of obviousness. Moreover, Carter does not correct for this deficiency since Carter provides for novel benzoylcyclohexane diones and fails to teach specific synergistic mixtures of the novel benzoylcyclohexane diones with other herbicides. Thus, there is no motivation to combine the benzoylcyclohexane diones of Carter with the glyphosate disclosed in Takematsu.

Therefore, in view of the foregoing, it is urged that the rejection does not establish a *prima facie* case of obviousness and the reconsideration and withdrawal of the rejection are requested.

Favorable action is earnestly solicited.

Respectfully submitted,

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